(1.3% vs. 11.3%; p=0.025). The 2-year cardiac survival was higher in patients with a complete coronary revascularization as compared to patients with incomplete revascularization (96% ± 3% vs. 78% ± 7%; p=0.002); completeness of revascularization was inversely related to the risk of death (HR 0.10; p=0.029).
Conclusions: In patients with multiple CTOs a successful PCI of all CTOs was associated with increased cardiac survival, and completeness of revascularization was a strong predictor of survival.

TCT-363

Can the SYNTAX Score Focused on the Evaluation of Chronic Total Occlusion(CTO) be a Useful Predictor of Successful Revascularization in CTO-PCIs?; Comparison with the J-CTO Score.

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Background: CTO intervention is still challenging because of the limited procedural success rate. The SYNTAX score is a unique tool to score complexity of coronary artery disease involving CTO lesion, but, it isn't a specific for CTOs.
Methods: We evaluated whether the SYNTAX score focused on the evaluation of CTO lesions (the Sys-CTO score)could predict successful revascularization for CTO-PCI or not,compared with the J-CTO score.We investigated the Sys-CTO score and the J-CTO score in consecutive 257 lesions treated with coronary angioplasty for CTOs. The Sys-CTO score was availed focused on each CTO lesion by extracting from the SYNTAX Calculator 2.11.The J-CTO score was determined by assigning one point for each independent parameter using the J-CTO score sheet.
Results: Overall successful revascularization rate were 85.2% (219/257), and average the Sys-CTO score and average the J-CTO score were 12.3±6.2, 1.75±1.30, respectively.We divided all CTO lesions into two groups;the successful revascularized groups(n=219;SG):the failed revascularized groups(n=38;FG).Relationship between the value of the J-CTO score and successful revascularization rate(%) were shown as follows ; (0):100,(1):93.4,(2):82.5,(3):67.4,(4):73.9,(5):66.7, respectively. As for the J-CTO score,there were statistic difference between the two groups;SG:1.6+/-1/3,FG:2.7+/-1.1(P<0.05).Whereas,as to the Sys-CTO score, there were balanced between the two groups;SG:12.3+/-6.3,FG:12.3+/-5.2.In the detailed evaluation of the Sys-CTO score,these distinctive six parameters seemed to be predictive factors inhibiting successful revascularization(P<0.05);Beyond the segment visualized contrast≧1segment(FG:34.2%;SG:25.1%),Blunt stump(FG: 63.1%;SG:45.2%), Bridging (FG:34.2%;SG:12.3%),Severe tortuosity(FG:26.3%;SG: 10.0%), Heavy calcification (FG:42.1%;SG:23.7%),Diffuse diseased and narrowed segment(FG:36.8%;SG:31.5%).
Conclusions: The J-CTO score was reconfirmed as the predictor of a successful revascularization for CTO-PCIs.On the other hand, the Sys-CTO score could not be predictive factor by itself. However,these distinctive six parameters could be a useful predictor of a successful revascularization for CTO-PCI as well as the J-CTO score.

TCT-364

Long-Term Outcomes of Percutaneous Coronary Intervention for Chronic Total Occlusions with Retrograde Approach

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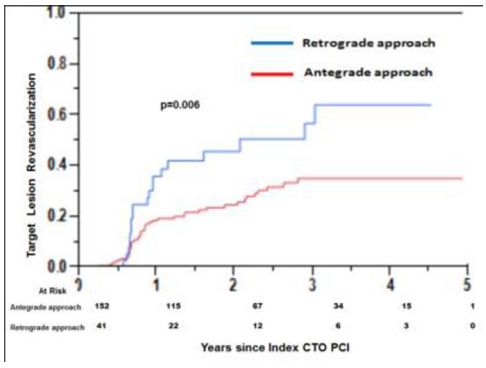
Background: There is a paucity of data on the long-term clinical outcomes of successful percutaneous coronary intervention (PCI) of coronary chronic total occlusions (CTOs) using the retrograde approach.
Methods: We performed a retrospective analysis of the long-term clinical outcomes of 193 consecutive patients who underwent successful CTO PCI at our institution between December 2008 and December 2011.
Results: Mean age was 63.6±8.3 years, 98% of patients were men, 42% had diabetes, 20% had prior coronary artery bypass graft (CABG) surgery and 34% had prior PCI. The retrograde approach was used in 41 patients (21.2%). The CTO target vessel was more frequently the right coronary artery among patients who underwent retrograde CTO PCI (78.1% vs. 45.7%, p=0.001). The mean stent length was longer in the retrograde group (83±32 vs. 64±32 mm, p=0.001). During a median follow-up of 2.0 years (interquartile range, 1.36 to 3.22 years), compared to antegrade CTO PCI group, patients who underwent retrograde CTO PCI had higher target lesion revascularization (TLR) (45.6% vs. 25.7%, p=0.006) (Figure 1). There was no significant difference in the incidence of all-cause mortality, myocardial infarction, non-target vessel revascularization or CABG between the two groups.
Conclusions: Retrograde CTO PCI was associated with higher incidence of TLR, but similar incidence of death and myocardial infarction. These findings likely reflect the higher complexity of CTO lesions and long stent lengths needed in those treated with the retrograde approach.



TCT-365

Prognostic Implication of Left Anterior Descending Artery in Patients with Chronic Total Occlusions and Complete Coronary Revascularization.

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Background: Coronary chronic total occlusion (CTO) is frequently associated with multivessel disease. Large registries have shown a higher mortality in patients with unsuccessful CTO-PCI for left anterior descending artery (LAD) as compared to nonLAD-CTO. Furthermore, patients with incomplete coronary revascularization due to non attempted or failed CTO-PCI had a poor prognosis as compared to patients with a complete revascularization. No data exist about the prognostic impact of drug eluting stent (DES) supported successful PCI for LAD-CTO in patients with a complete coronary revascularization achieved by PCI.
Methods: From the prospective Florence CTO-PCI registry, since 2004 to 2010, 644 patients underwent a successful PCI for CTO (>3 months) with a complete coronary revascularization within one month. The prognostic impact of LAD-CTO on cardiac mortality was assessed by Kaplan-Meier estimation and by forward stepwise Cox regression multivariate analysis.
Results: A successful CTO-PCI with a complete coronary revascularization was achieved in 194 patients with LAD-CTO and in 450 patients with nonLAD-CTO. Baseline characteristics of patients with LAD-CTO vs. nonLAD-CTO were similar: mean age 68 ± 11 vs. 67 ± 11 yrs, male 83% vs. 86%, diabetes 22% vs. 23%, previous myocardial infarction 51% vs. 48%, acute coronary syndrome at admission 34% vs. 29%, 3-vessel coronary disease 43% vs. 48%, left ventricular ejection fraction (EF) 44% ± 13 vs. 45% ± 12, stent length >40 mm in LAD-CTO 51% vs. 57% in non-LAD-CTO. A multivessel PCI was performed in 70% of both groups. The clinical follow-up rate was 100% (median 1 yr). The cardiac survival rate was higher in the nonLAD-CTO group as compared to LAD-CTO group (96% ± 2% vs 89% ± 3%; p=0.004). At multivariate analysis the independent predictors related to cardiac mortality were LAD-CTO (HR 2.9; p=0.025), age (HR 1.1; p=0.002) and EF <0.40 (HR 14; p<0.001).
Conclusions: The successful treatment of nonLAD-CTO associated with a complete revascularization links with a very high survival rate. LAD-CTO is a predictor of cardiac mortality despite the completeness of coronary revascularization.

TCT-366

Short and Long-Term Outcomes After Retrograde Coronary Intervention for Chronic Total Occlusion: Comparison With the Anterograde Approach

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Background: Little data is available about safety, feasibility, and long-term outcome after retrograde CTO PCI. This study sought to examine the short and long-term outcomes of retrograde chronic total occlusion (CTO) percutaneous coronary intervention (PCI).
Methods: From a single-center prospective registry, 1343 consecutive patients underwent CTO PCI from January 2004 to January 2012.
Results: Of these, 144 (10.7%) had retrograde CTO PCI (0, 1.3, 10.2, 6.2, 15.6, 10.9, 16.1, 23.4% from 2004 to 2011). Patients with retrograde CTO were significantly younger (61.2±10.7 vs 63.9±11.4 years, p<0.01), more frequently dyslipidemic (72.9 vs 62.3%, p<0.01), right coronary artery CTO (65.3 vs 43.7%, p<0.01), longer lesion length (27.2±21.9 vs 19.6±16.5 mm, p<0.01) and less tapered morphology (31.7 vs 46.5%, p<0.01). Procedural success rate of antegrade and retrograde approach was 73.7 and

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